

REMARKS:

- 1) In the earlier Office Action of December 23, 2009, the Examiner had applied US Patent 5,955,391 (Kameda et al.) as a prior art reference in a rejection, but this reference has not been cited on an Examiner's Notice of Reference Cited (Form PTO-892). Therefore, please issue a Supplemental Form PTO-892 citing US Patent 5,955,391 (Kameda et al.).
- 2) The claims have been amended as follows. Independent claim 16 and 21 have been amended to incorporate subject matter from prior claim 34. Claims 16, 18 and 19 have been editorially amended to remove reference numbers. Claims 33 and 34 have been canceled. Such editorial amendments and combination of claims do not introduce any new matter. Entry and consideration of the amendments are respectfully requested.
- 3) Referring to section 5 on pages 2 and 3 of the Office Action, the rejection of claims 16, 18 to 30 and 32 to 34 as obvious over US Patent 5,426,000 (Labib et al.) is respectfully traversed.

Independent claims 16 and 22 have each been amended to incorporate subject matter from prior claim 34.

As discussed in the specification at page 7 lines 9 to 26, the claims previously covered two alternatives for forming the ceramic particles embedded in the coating of the fibers. In a first alternative, the reactive atoms of the reactive gas react with the metallic alloy coating components in the gas phase

during the step of depositing the coating on the fibers, so that the resulting ceramic particles are formed and deposited during the coating step (e.g. page 7 lines 14 to 16). In a second alternative, the reaction of the reactive atoms with the metallic alloy components of the coating occurs during a subsequent thermomechanical treatment that is performed after the step of depositing the coating, so that the resulting ceramic particles are formed and deposited during this thermomechanical treatment after the coating step (e.g. page 7 lines 16 to 21 and 25 to 26).

By incorporating subject matter from prior claim 34 into each independent claim 16 and 22, the claims are now limited to the second alternative, wherein a thermomechanical treatment step is performed on the coated fibers after the coating deposition step, and the reactive atoms that had been introduced into the coating undergo a reaction with the metal atoms of the titanium-based coating matrix material during the thermomechanical treatment step after the coating step.

The Labib et al. reference does not disclose and would not have suggested to perform such a thermomechanical treatment step after the coating deposition step. Moreover, Labib et al. do not disclose or suggest that reactive gas atoms which were introduced into the coating during the coating deposition step are thereafter reacted with metallic atoms of the coating during the subsequent thermomechanical treatment step so as to form ceramic particles in the coating during a subsequent thermomechanical treatment step.

While the Examiner indicated that prior claim 34 was rejected, the rejection does not provide any detailed discussion of the feature of prior claim 34, namely that the reacting of the introduced reactive gas atoms with the metallic coating atoms to form and deposit ceramic particles in the coating occurs during a thermomechanical treatment that is performed after the step of depositing the coating. Contrary to such features that are now included in claims 16 and 22, the Examiner pointed out that Labib et al. disclose the co-deposition of titanium and titanium nitride, which results in titanium nitride ceramic particles being formed and embedded in the coating during the step of depositing the coating. Thus, if anything, the method according to Labib et al. involves reacting the gas atoms with the titanium atoms during the coating deposition step, such that the resulting titanium nitride ceramic particles are co-deposited already during the deposition of the coating (col. 3 lines 22 to 32 and 48 to 68, col. 4 lines 38 to 45). There is no teaching, suggestion or indication whatsoever, that a further thermomechanical treatment shall be performed after the coating deposition step, so as to react the introduced reactive gas atoms with the metallic atoms of the coating and thereby form and deposit ceramic particles during such a subsequent thermomechanical treatment following the coating deposition step. From the teachings of Labib et al., a person of ordinary skill in the art would have understood only that titanium nitride is co-deposited with the titanium because of the reaction between the titanium and the nitrogen occurring during the coating

deposition step. A person of ordinary skill would have had no teachings or suggestions to first deposit the metallic coating material while also introducing nitrogen atoms into the coating, and then thereafter perform a thermomechanical treatment for reacting the introduced nitrogen atoms with the titanium coating atoms so as to form titanium nitride ceramic particles during such a subsequent thermomechanical treatment step after the coating deposition step.

The dependent claims are patentably distinguishable over the prior art already due to their dependence.

For the above reasons, the Examiner is respectfully requested to withdraw the rejection of claims 16, 18 to 30 and 32 to 34 as obvious over Labib et al.

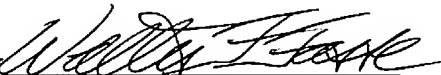
- 4) Referring to section 6 on pages 3 and 4 of the Office Action, the rejection of claim 31 as obvious over Labib et al. in view of US Patent 5,413,851 (Storer) is respectfully traversed. Claim 31 depends from claim 22, which has been discussed above in comparison to Labib et al. The Storer patent has been additionally applied for disclosing a cooling step to be performed after a step of coating silicon carbide fibers with a titanium nitride coating by depositing titanium under a nitrogen reactive gas. Thus, the method of Storer also involves forming and depositing the titanium nitride ceramic already during the step of depositing the coating material, similarly like the Labib et al. reference discussed above. Thus, even a combined consideration of these two references would not have suggested the subsequent thermomechanical treatment step for reacting the

introduced reactive atoms with the metallic coating atoms to subsequently form the ceramic particles during the thermomechanical treatment step after the coating deposition step. Thus, claim 31 is patentable already to its dependence from currently amended claim 22. The Examiner is respectfully requested to withdraw the rejection of claim 31 as obvious over Labib et al. in view of Storer.

- 5) Favorable reconsideration and allowance of the application, including all present claims 16 and 18 to 32, are respectfully requested.

Respectfully submitted,

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Enclosure:  
Transmittal Cover Sheet

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